Nutrition-Sensitive Agriculture Training (NSA)

Ministério da Saúde

TOMAK

Australian Aid

Session 1: Introduction to the training

Session summary

- Agenda
- Introduction
- General expectations
- Presentation
- Pre-test

Introductions

Ball throwing game:

- Name
- Where you are from
- Where you live
- Your favourite crop and the reason

Training expectations

1. Facilitator distributes coloured cards to the participants
2. Participants write down their expectations from the NSA training
3. Facilitator collects the participants' expectations and places them on the wall or flipchart

NSA training objectives

- To increase the knowledge and ability of agriculture extension workers to implement NSA in their municipalities
- To strengthen the partnership between relevant partners including MAF, MoH and other implementing organisations
- To consider gender and social inclusion as an important part of NSA implementation
- To ensure agriculture extension workers can implement NSA well

After the training, participants will be able to:

- Describe the approaches, benefits and challenges of NSA.
- Create an NSA assessment plan for their village.
- Discuss some key topics related to NSA with farmers groups.
- Utilise the nutritious crops extension tools to speak to families about growing nutritious crops.
- Practice basic facilitation skills.

National Counsel for Food Security, Sovereignty and Nutrition in Timor-Leste (KONSSANTIL)

- Comoro Declaration (2010): Timorese have the right to nutritious food
- National Action Plan to integrate the 10 ministries, 4 state secretaries, NGOs, Human Rights Ombudsman and President
- Seeks to stop hunger in Timor-Leste and promotes local produce
- Led by MAF at the national level and Municipal Authority President at the municipal level
- MAF: (1) strengthens food security (increase production and productivity) (2) develops commodities based on local potential, (3) improves coordination between ministries and between local authorities and extension workers
- MoH: provides health services for the population, nutrition counseling, treatment of illnesses and food supplementation for malnutrition

Session 2: What is NSA?

What is NSA?

Introduction to nutrition-sensitive agriculture (NSA)

- NSA is an approach that looks to strengthen the contribution of agriculture to nutrition.
- Focuses on the benefits of a variety of foods, the nutritional value from food, food being good for health and productivity, as well as rural livelihoods *(FAO).*
- Nutrition-sensitive agriculture is an approach that seeks to address the underlying causes of malnutrition.

Aim of ASN

To ensure food production through agriculture contributes to an increased consumption of nutritious food and access to markets.

Photo: HIAM Health

Photo: TOMAK

Difference between nutrition-specific and nutrition-sensitive

Nutrition-specific

Responds directly to malnutrition. Nutritional care for women and children.

Example: Breastfeeding and child feeding, (Plumpy Nut and maize flour, ORS for diarrhoea)

Nutrition-sensitive

Supports factors that are relevant to nutrition status

Why should agriculture be concerned with nutrition?

- Can help families to plant more nutritious crops
- Increase profits to buy nutritious food
- Improve food security
- Natural resource sustainability
- Consider women farmer's time and contribution

Just agriculture or NSA?

Which of the following are NSA activities?

- Activities that increase profits from agricultural production in the market
- Supporting farmers to choose to plant crops that are nutritious in order to consume them
- Integrated training with commercial horticulture production groups and natural resource management groups
- Chicken vaccination campaign that explains the importance of vaccination and the nutritional benefits of eggs
- Distributing maize flour to children with malnutrition
- Storing nuts to last throughout the year (preserving a source of protein)
- Helping farmers to plant crops that can be sold and using the profits to buy nutritious food

Which of the following are NSA activities?

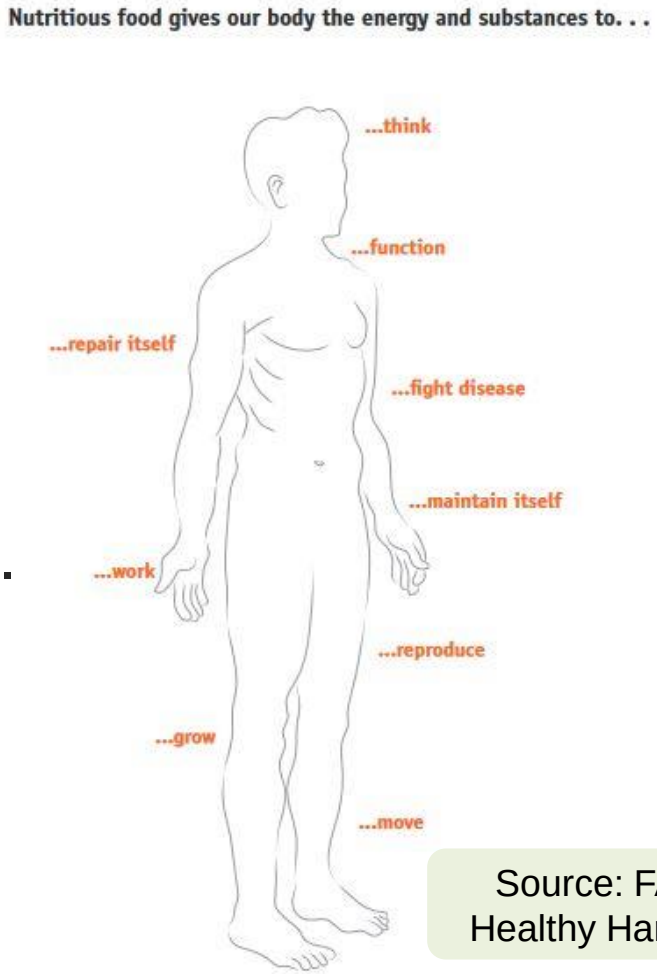
• Activities that increase profits from agricultural production in the market	*No*
• Supporting farmers to choose to plant crops that are nutritious in order to consume them	*Yes*
• Integrated training with commercial horticulture production groups and natural resource management groups	*No*
• Chicken vaccination campaign that explains the importance of vaccination and the nutritional benefits of eggs	*Yes*
• Distributing maize flour to children with malnutrition	*No*
• Storing nuts to last throughout the year (preserving a source of protein)	*Yes*
• Helping farmers to plant crops that can be sold and using the profits to buy nutritious food	*Yes*

Why is agriculture important for nutrition?

- Agriculture provides food that can improve nutrition, and nutrition provides energy and good health to farmers.

What are the benefits of good nutrition?

- More strength, increased productivity.
- Strong body: blood vessels and bones.
- Good memory, good capacity to learn, clear thinking and ideas.
- Increased immunity against illnesses.



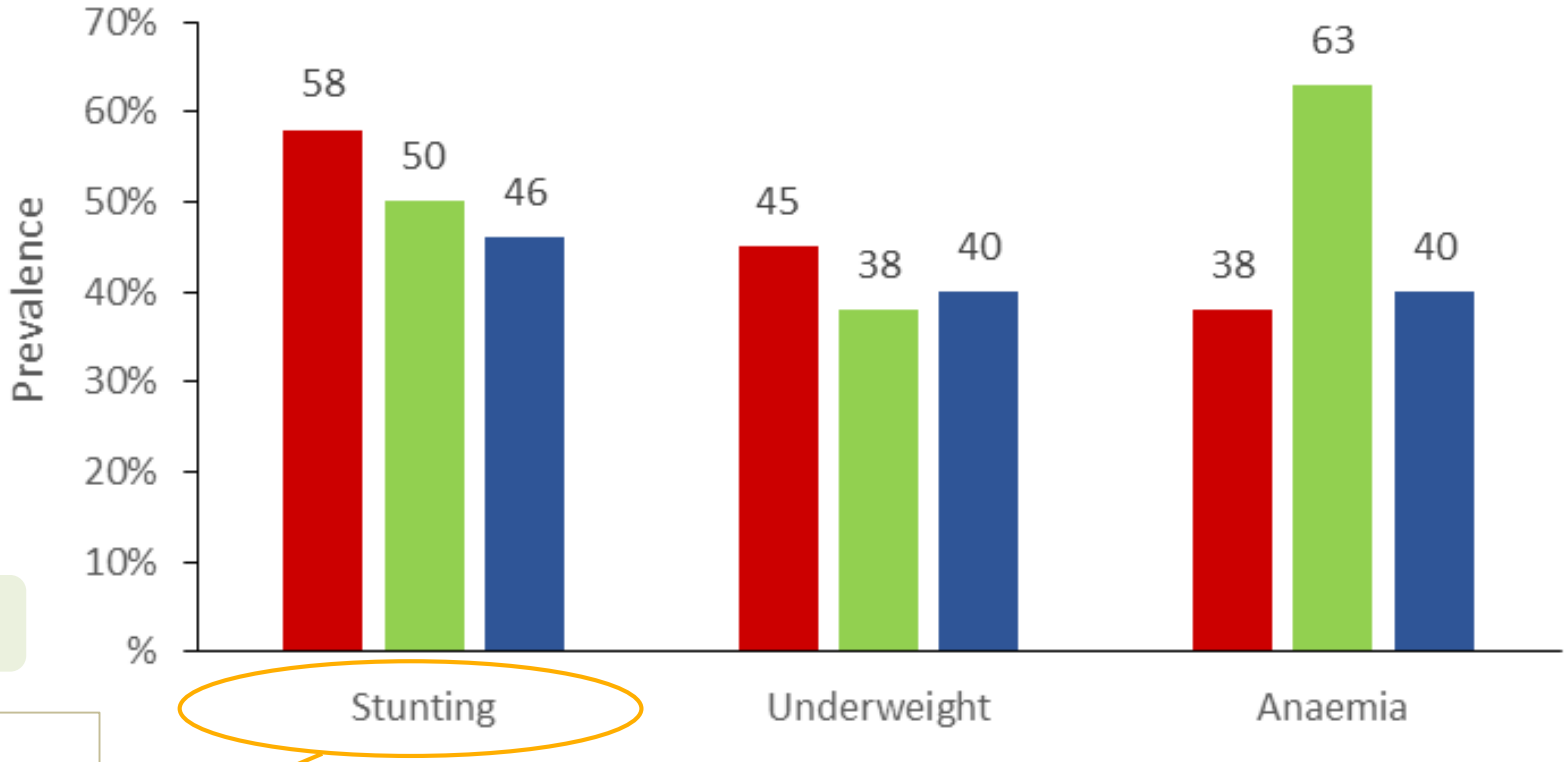
Source: FAO Healthy Harvest

Session 3: Nutrition context in Timor-Leste

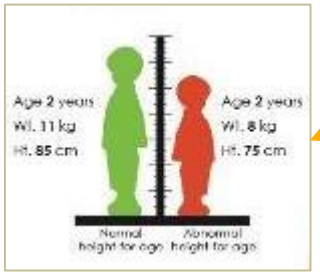
Case study: Two girls

- Split into 3 groups.
- Discuss the story for 15 minutes.
- Each group presents the results of their discussion.

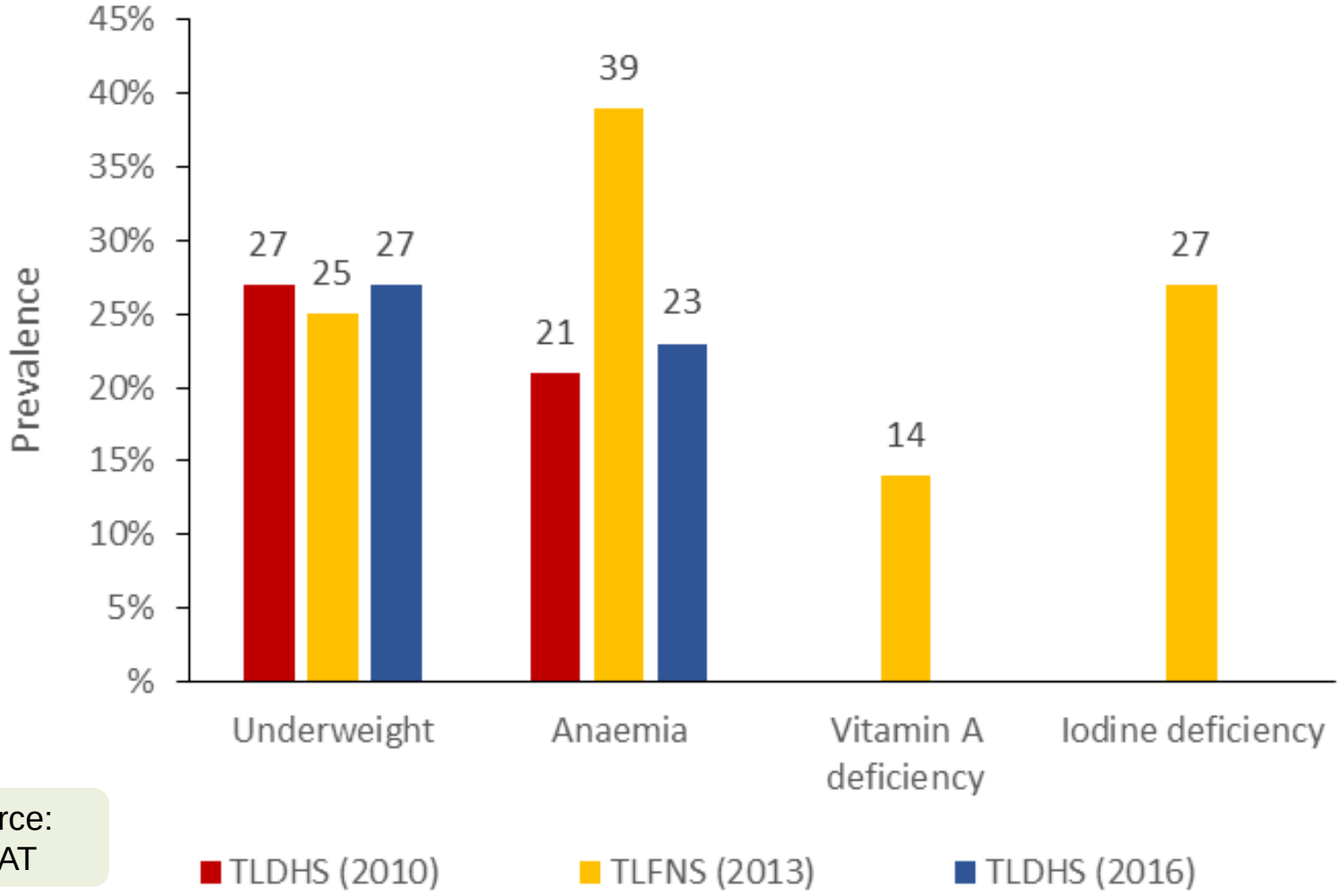
Nutritional status of children under 5 years*



Source: DFAT

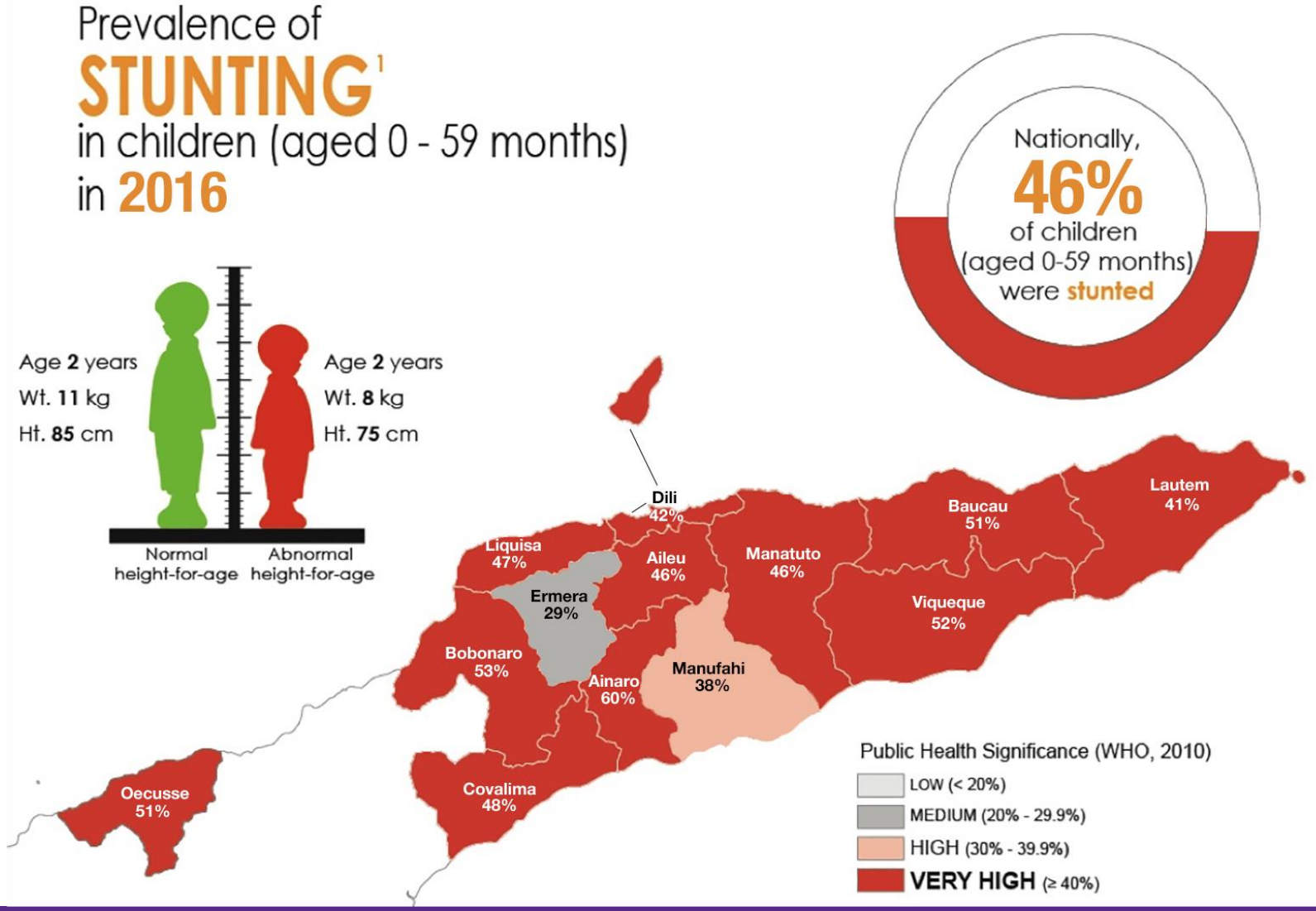


Nutritional status of women of reproductive age

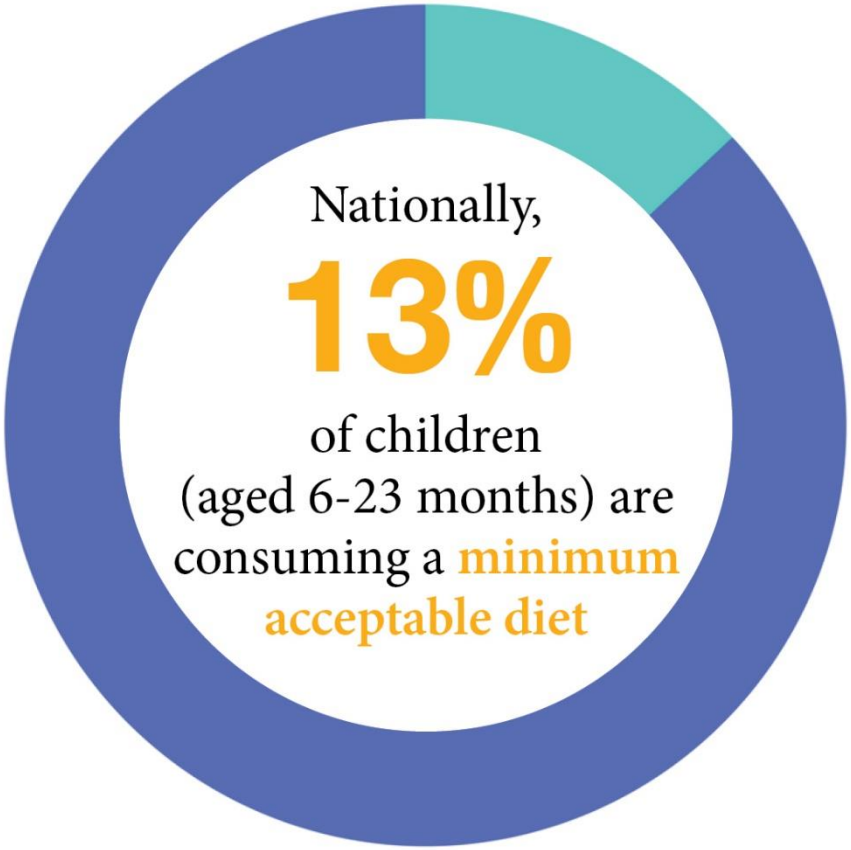


Source: DFAT

Malnutrition among children in Timor-Leste (aged 0 – 59 months)



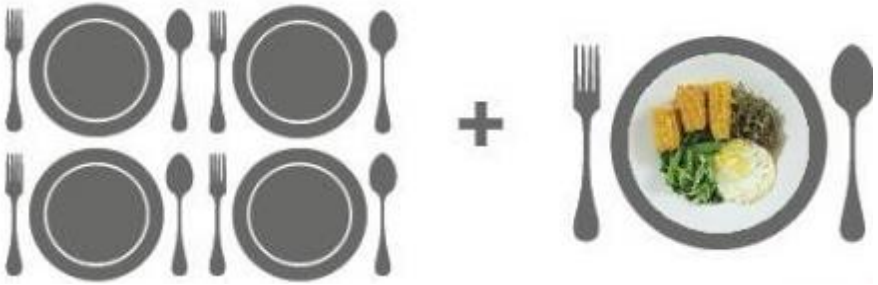
Contributing factors: Diet



*Data from the Timor-Leste Demographic & Health Survey (2016)

Percentage of children (6-23 months) consuming a **MINIMUM ACCEPTABLE DIET** in **2016**

MEAL FREQUENCY + **DIVERSITY**



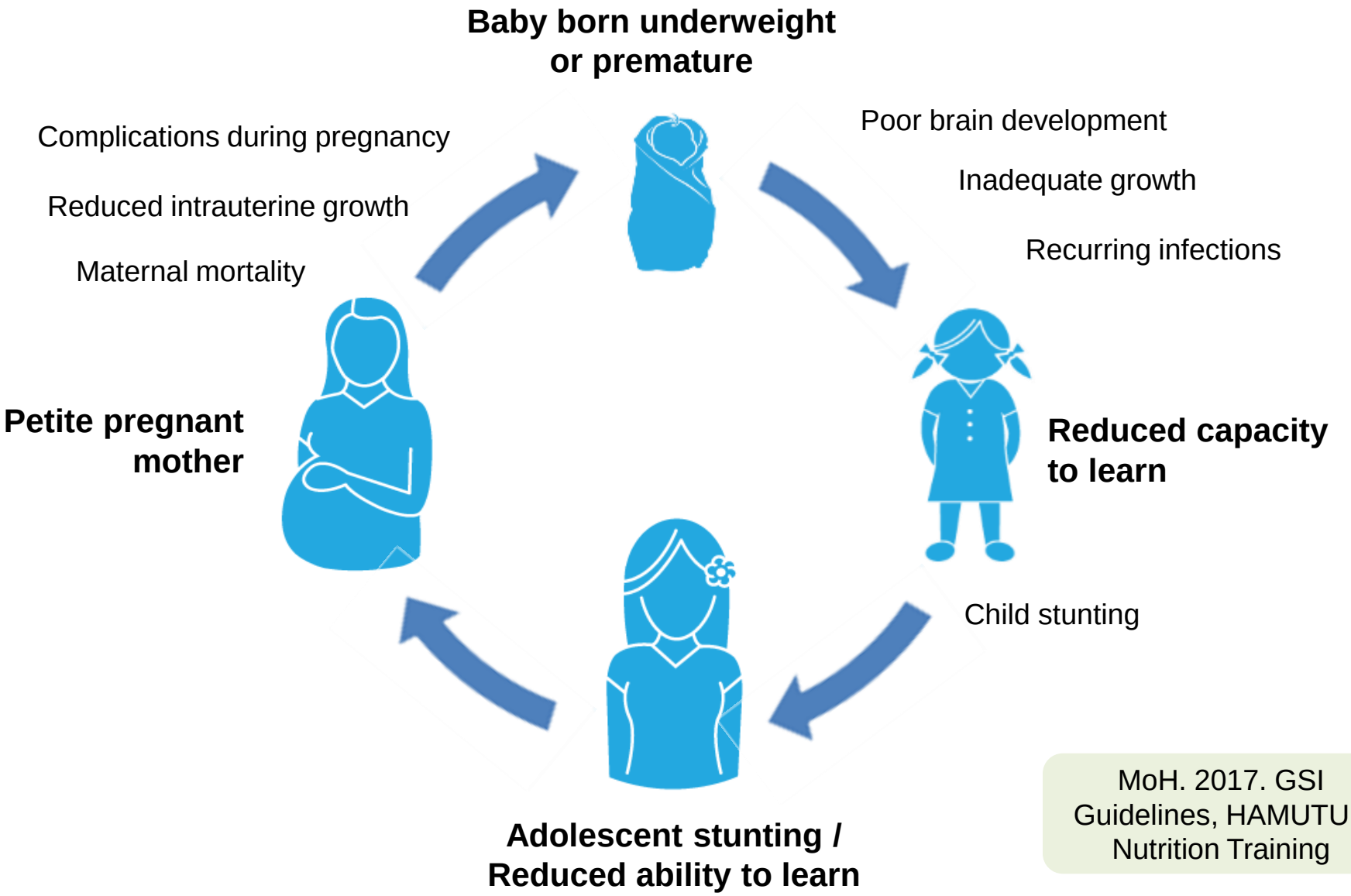
Source: DFAT (2015)

Session 4: Malnutrition

Activity: Intergenerational cycle of malnutrition

1. Split into 4 groups.
2. Each group draws an image of a baby, child, adolescent girl and an adult woman.
3. Each group gives a name to their image.
4. Each group responds to the question “Why do we need good nutrition?”
5. 15 minutes.

Intergenerational cycle of under-nutrition



MoH. 2017. GSI Guidelines, HAMUTUK Nutrition Training

What is malnutrition?

Mal – inadequate

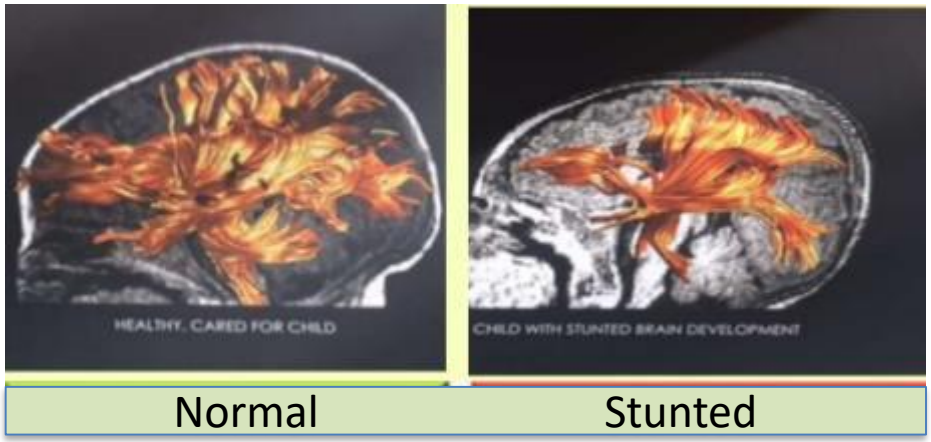
Nutrition - food or nourishment

Malnutrition is a situation that occurs when a person has insufficient consumption or diversity of food or too much food (obesity) or illness.

Nutrition = food + health

Impact of malnutrition

Brains of two children:

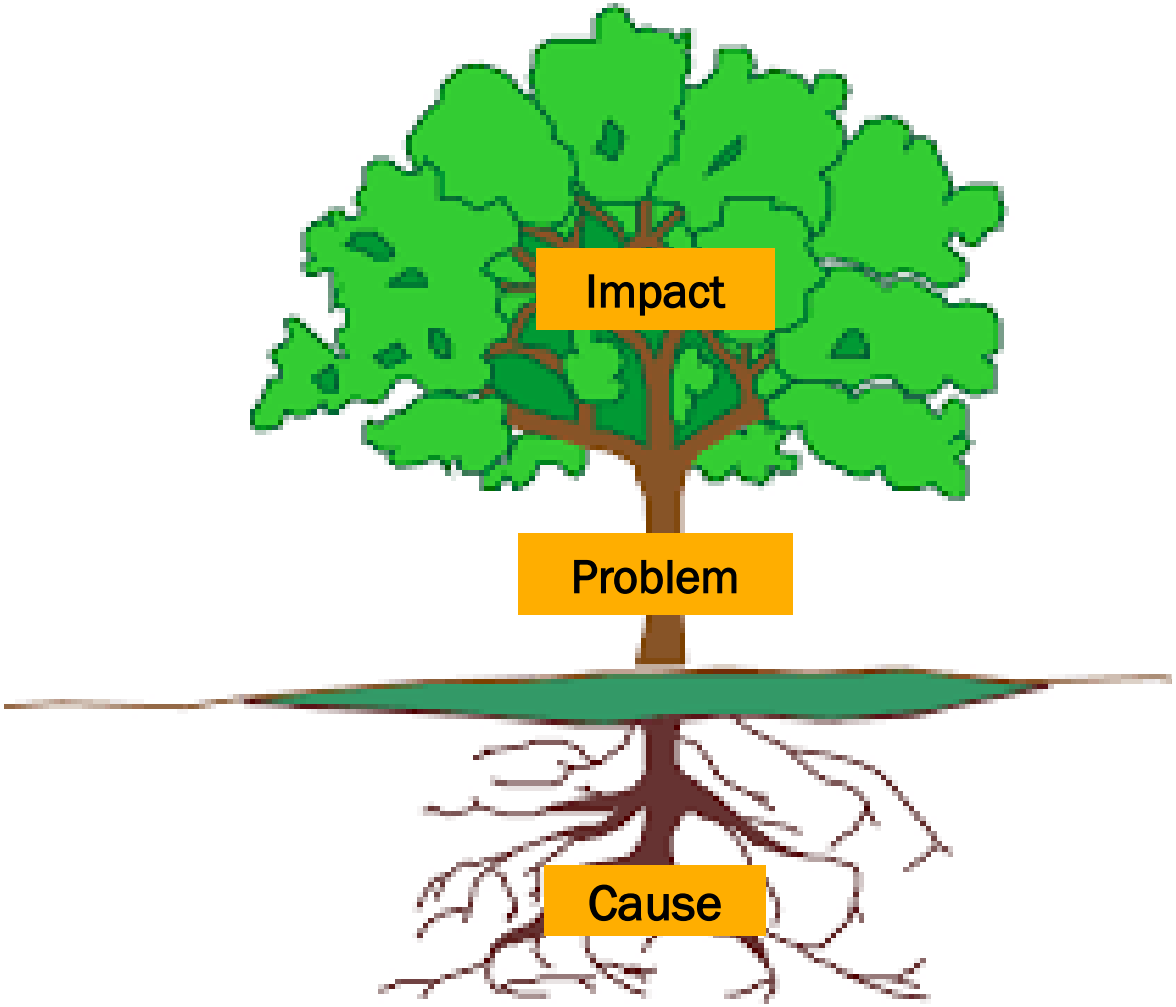


Source: World Bank, Jan 2018

- Delayed mental and physical growth
- Recurring illnesses
- Increase in unemployment
- High mortality
- Pregnant women with malnutrition have babies weighing less than 2.5 kg

Problem tree

Analysing the causes of and impact of malnutrition in Timor-Leste

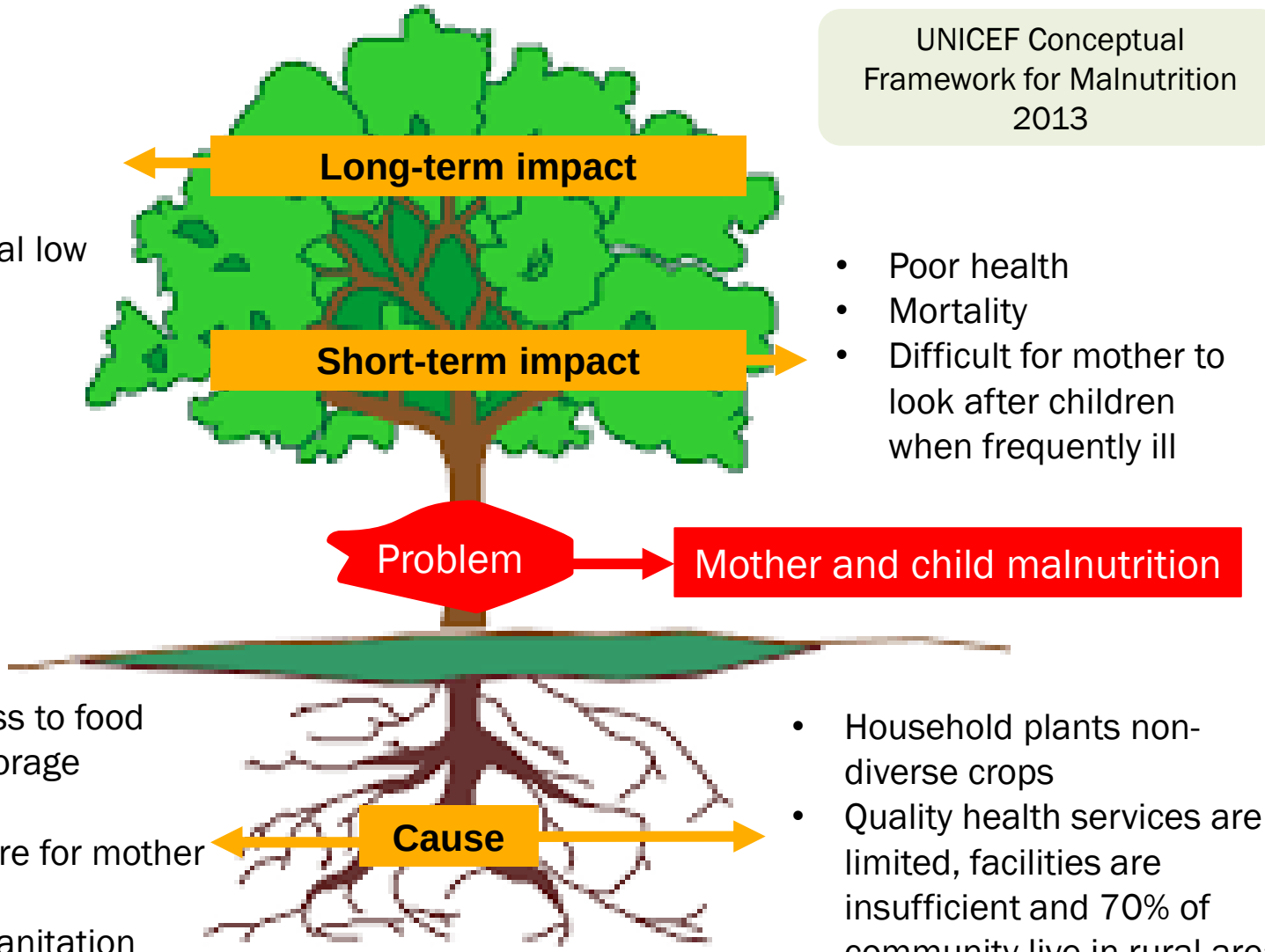


- What makes a tree's roots strong?
- How does a tree become strong?
- Which parts of the tree can you see?
- Which parts can't you see?
- Why are the roots important?

Problem tree

UNICEF Conceptual Framework for Malnutrition 2013

- Adult height
- Mental ability
- Economic productivity
- Intergenerational low height



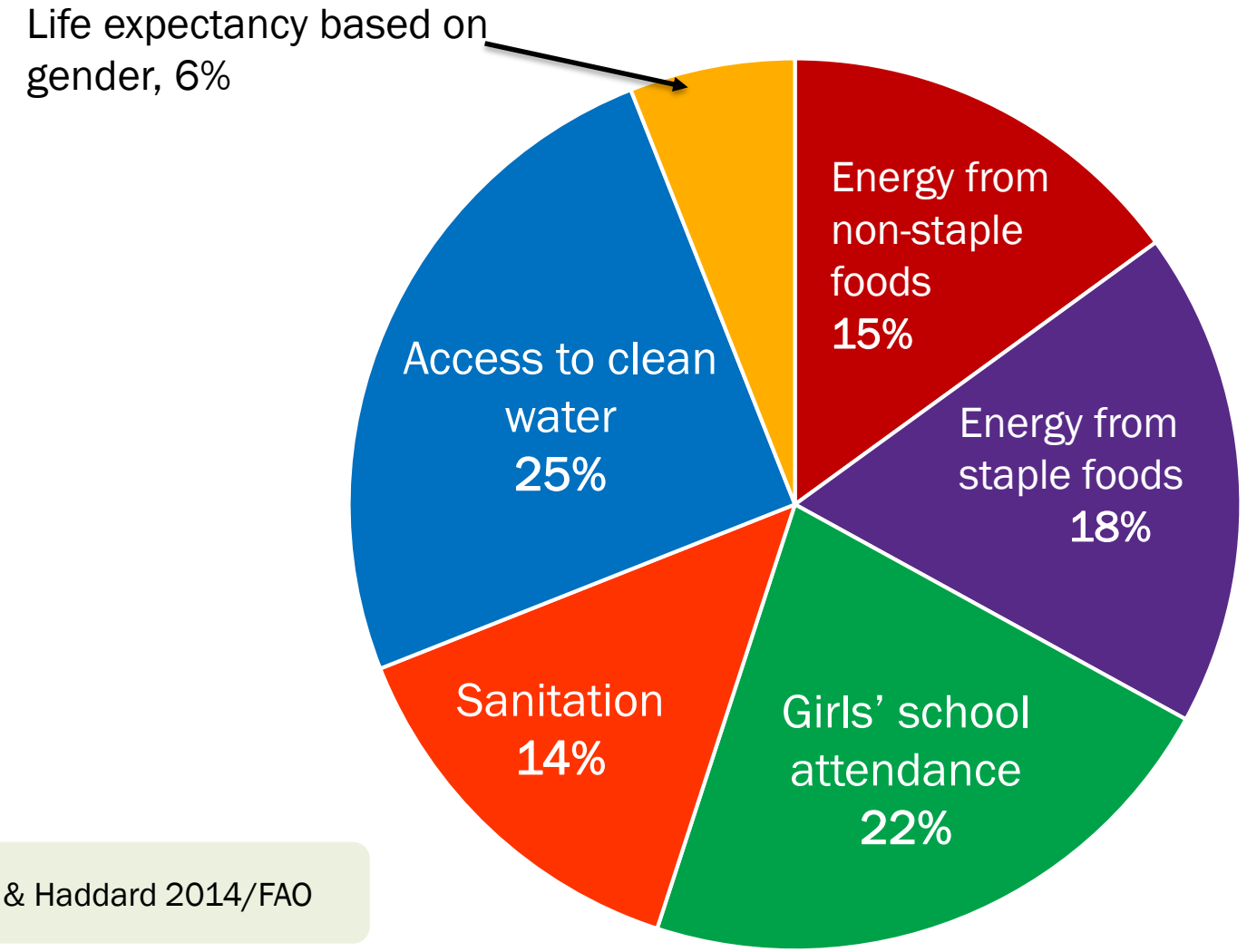
- Poor health
- Mortality
- Difficult for mother to look after children when frequently ill

- Insufficient access to food
- Insecure seed storage
- Recurring illness
- Poor food and care for mother and child
- Poor water and sanitation
- Influence of sacred/banned foods

- Household plants non-diverse crops
- Quality health services are limited, facilities are insufficient and 70% of community live in rural areas

Don't forget! There are many contributing factors

Reduction in stunting, 1970 to 2010 (%)



Smith & Haddard 2014/FAO

Session 5: Nutrition

Activity: Who is the priority for nutrition?

- Split participants into 3 groups
- Facilitator explains the ‘true or false’ activity to the participants
- Participants look and discuss the statements to provide a response
- Participants present the results of their discussion
- 15 Minutes

True or false?

No.	Statement	Answer
1	A mother with malnutrition has a higher possibility of an underweight baby.	
2	The quantity and variation of food needed by pregnant women is the same as they need to consume before pregnancy.	
3	Breastfeeding mothers need lots of food for their own health and nutrition status so the baby can develop well.	
4	Many children have delayed mental and physical development after the age of two.	
5	Nutrition begins from the pregnant mother to the 2 year old child, which is a critical stage of development and growth for the child.	

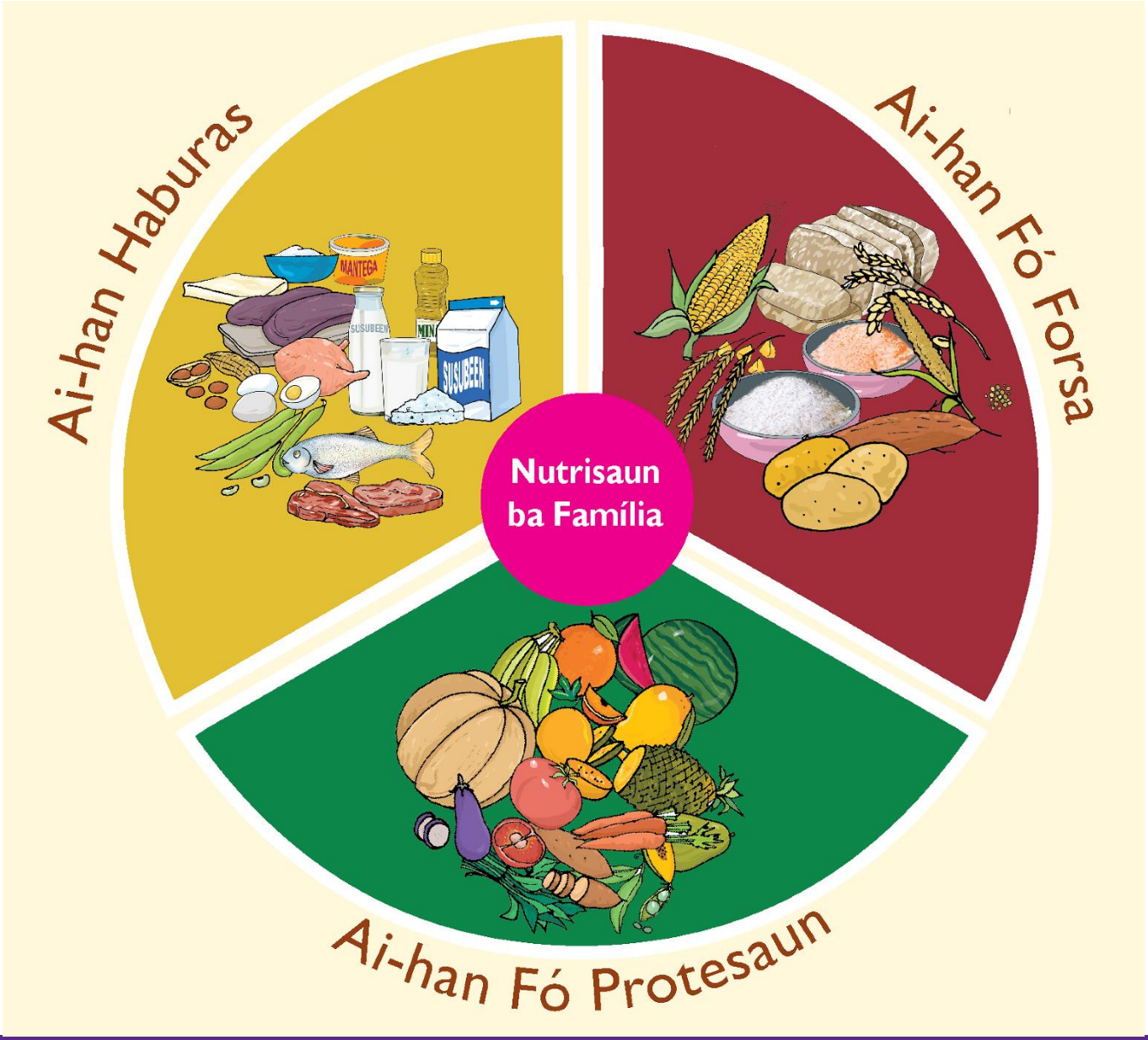
True or false?

No.	Statement	Answer
1	A mother with malnutrition has a higher possibility of an underweight baby.	*True*
2	The quantity and variation of food needed by pregnant women is the same as they need to consume before pregnancy.	*False*
3	Breastfeeding mothers need lots of food for their own health and nutrition status so the baby can develop well.	*True*
4	Many children have delayed mental and physical development after the age of two.	*True*
5	Nutrition begins from the pregnant mother to the 2 year old child, which is a critical stage of development and growth for the child.	*True*

Activity: 3 food groups

- Split participants into 3 groups
- Each group selects images of foods that have been prepared beforehand by the facilitator
- Each group discusses and identifies which group each food belongs to from: 1) carbohydrates and oils 2) protein, or 3) vitamins and minerals. The images should be placed on the banner/poster showing 3 food groups.
- Facilitator and other groups observe the presentations of each group
- Facilitator provides a conclusion.

How many food groups are there?



MoH Flipchart: 'Nutrisaun ba Familia'

Nutrients

What do you see in the photo?

What is happening (or will happen)?

How many types of nutrients are there?

Macronutrients

We need a large amount of these because they provide energy, growth and help maintain a healthy body.

Micronutrients

We need only a small amount of these but they are still very important to maintain good health.

Source: HAMUTUK, Nutrition Training, 2016

Type of nutrients in food

Macronutrients

- Protein
- Carbohydrates
- Fats

Micronutrients

- Vitamins
- Minerals

Source: HAMUTUK, Nutrition Training 2016

Micronutrient- Vitamin A

- Prevents illness, helps the body fight various infections.
- Most important for proper growth and reproduction.
- When Vitamin A is deficient: can cause poor sight (eye function)

Micronutrient - Iron

- Is in blood and together with protein, strengthens blood.
- Iron deficiency: Delays brain development and increases risk of maternal and child mortality, causes anaemia.

Micronutrient- Zinc

- Heals wounds, prevents illness and infections, helps growth, strengthens bones, prevents cancer and helps brain function.

Nutrition for families

- All family members need to eat a diverse range of foods.
- Food diversity is important for health and development.
- There is no one food that can provide all nutrients.
- Eat foods from the three food groups: carbohydrates and oils, protein, and vitamins and minerals.

Source: MoH Flipchart: 'Nutrisaun ba Familia'

Benefits of breast milk

1. Provides everything a baby needs during the first 6 months
2. Acts like the first immunisation for babies and is full of all the nutrients a baby needs.
3. Easy and ready to provide to baby at any time (free).
4. Breastfeeding can strengthen the relationship between mother and child.
5. Develops a baby's body.

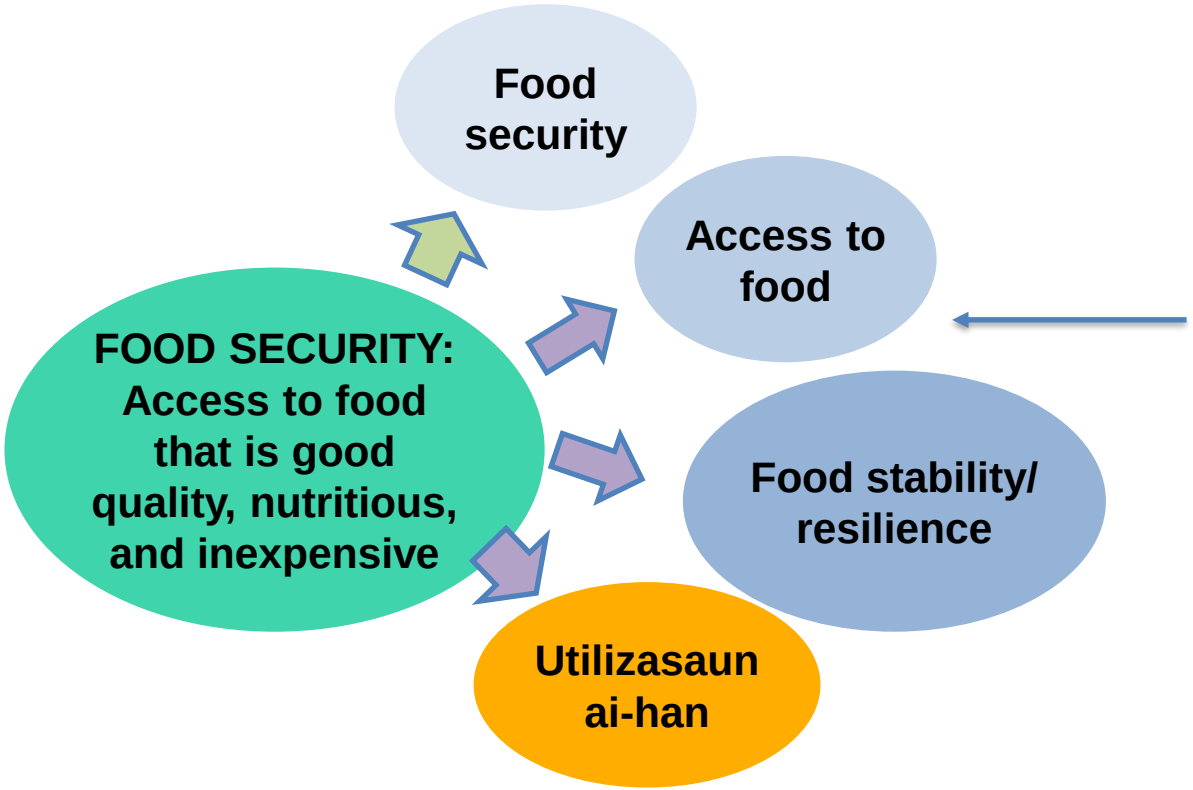
MoH recommends continued breastfeeding until a child is 2 years or older.

Source: MoH 2017. Mother Support Group Guide

Session 6: Agriculture for nutrition

Food Security

Access of all people at all times to enough food for an active, healthy life" *(World Food Security Conference, 1996)*



MAP extension worker with farmer

Security: Enough food with sufficient and consistent diversity (NSA)
Access: Ability of households and individuals to access nutritious food (NSA)
Stability: Ability to protect and preserve food in non-productive times (NSA)
Utilisation: Use/consumption of nutritious foods (Behaviour change)

Activity: Seasonal calendar

1. Split participants into 3 groups
2. Each group will receive a calendar from the facilitator to discuss
3. Each groups marks climate/rainfall periods within a year on the sample calendar; a little rain, rainy season, extra rain, dry season, windy, lots of water, enough water, and no water.
4. Each group presents their results for group discussion

Example seasonal calendar

Season	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC
A little rain												
Rainy season												
Extra rain												
Dry season												
Windy												
Lots of water												
Enough water												
No water												
Climate change												

Activity: Calendar for planting different types of crops

1. Split participants into 3 groups
2. Each group receives a calendar from the facilitator for discussion
3. Each group marks the time to plant different crops throughout the year in the example calendar including; rice, maize, peanuts, onions, beans, vegetables, fruits, cassava and sweet potato
4. Each group presents their results to the group for discussion

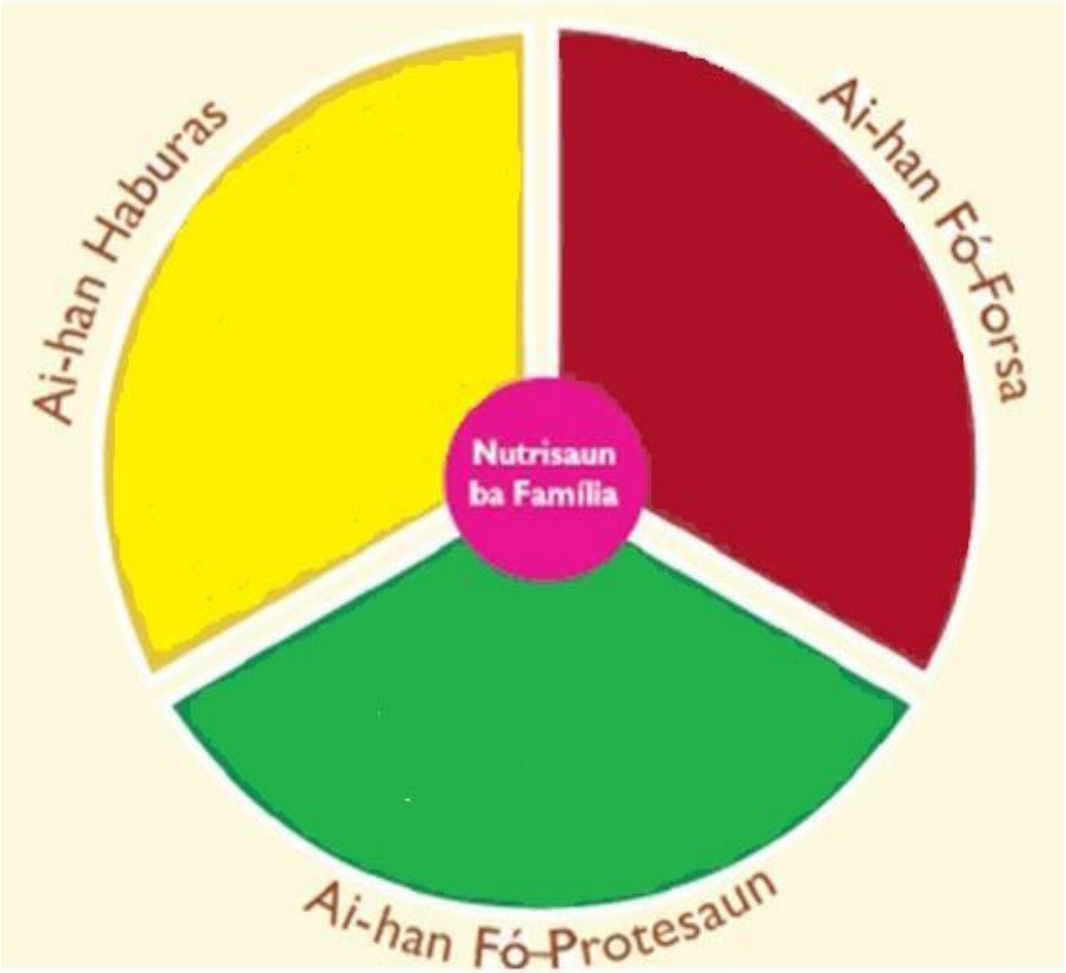
Example calendar for planting different types of crops and harvest/availability

Crop type	JAN	FEB	MAR	APR	MAY	JUNE	JUL	AUG	SEPT	OCT	NOV	DEC
Rice - plant		X	X	X	X							
Rice – Harvest/ available						✓	✓					
Peanut – Plant	X	X	X									X
Peanut– Harvest /available				✓	✓	✓						
Carrot – Plant												
Carrot – Harvest/ available												
Other?												

For each step who leads? Women or men?

Rice	M	F	MF
Seed selection			
Land preparation I			
Establish seedlings			
Land preparation II			
Grading			
Planting			
Replanting			
Weeding			
Fertilisation			
Managing pests and disease			
Harvest (cutting, threshing, cleaning)			
Post-harvest (preparing for transport, transport, drying, storage)			

Individual activity: Identify foods in your village

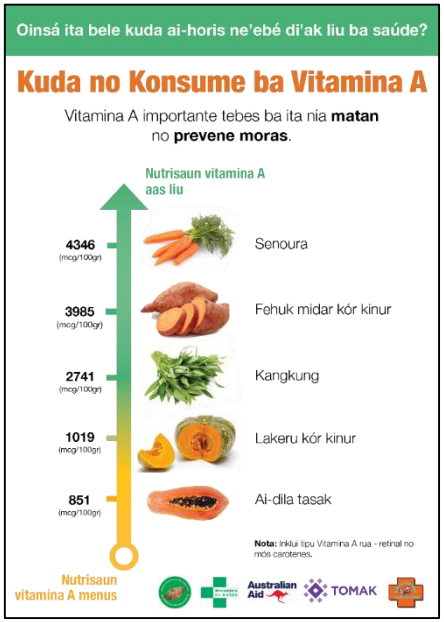


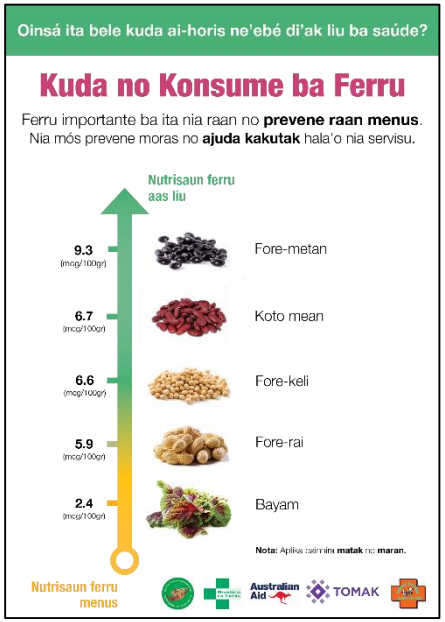
Activity: Identify foods in each village

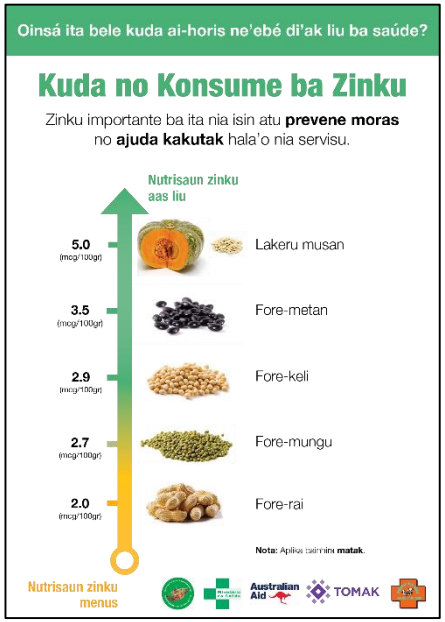
1. Facilitator distributes a handout to each participant to draw a plate according to the three food groups: carbohydrates and oils, protein, and vitamins and minerals
2. Each participant identifies foods that farmers grow in their village according to the 3 food groups.
3. Which food groups are limited and why are they not available in the village? In which months? *(do not include crops/animals that are rarely eaten)*
4. What can MAF contribute? What can an extension worker do?
5. Split into groups and discuss in small groups

Nutritious crops

- This nutritious crops tool can be used to hold discussions with farmers about crops which have the micronutrients Vitamin A, Iron, no Zinc.

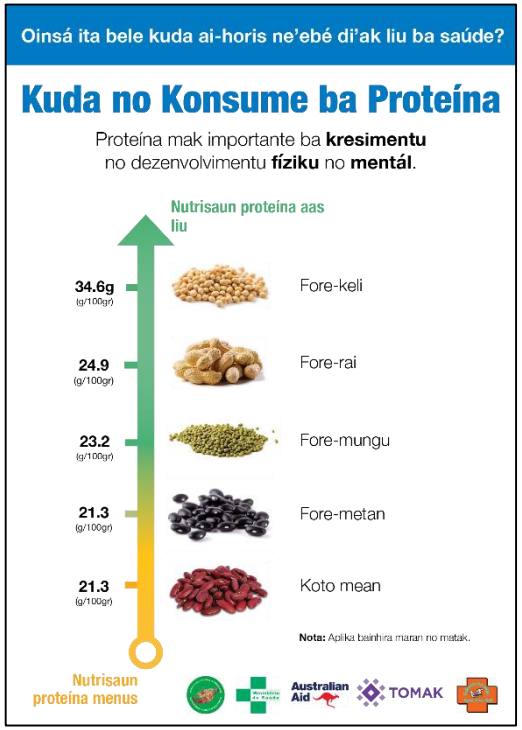






Nutritious crops

- This nutritious crops tool can be used to hold discussions with farmers about crops that are high in protein.



Session 7: Behaviour change – Is it easy?

What do you think about the following statements: true or false?*

1. Women in rural areas lack information which is why they feed only plain rice porridge to their children.
2. It's better if a farmer keeps some of their harvest for consumption before selling the rest.
3. To resolve the problem of taboo foods we have to teach farmers so that they start eating them.

*For discussion only. No need to show as either true or false.

Activity: My own behaviour

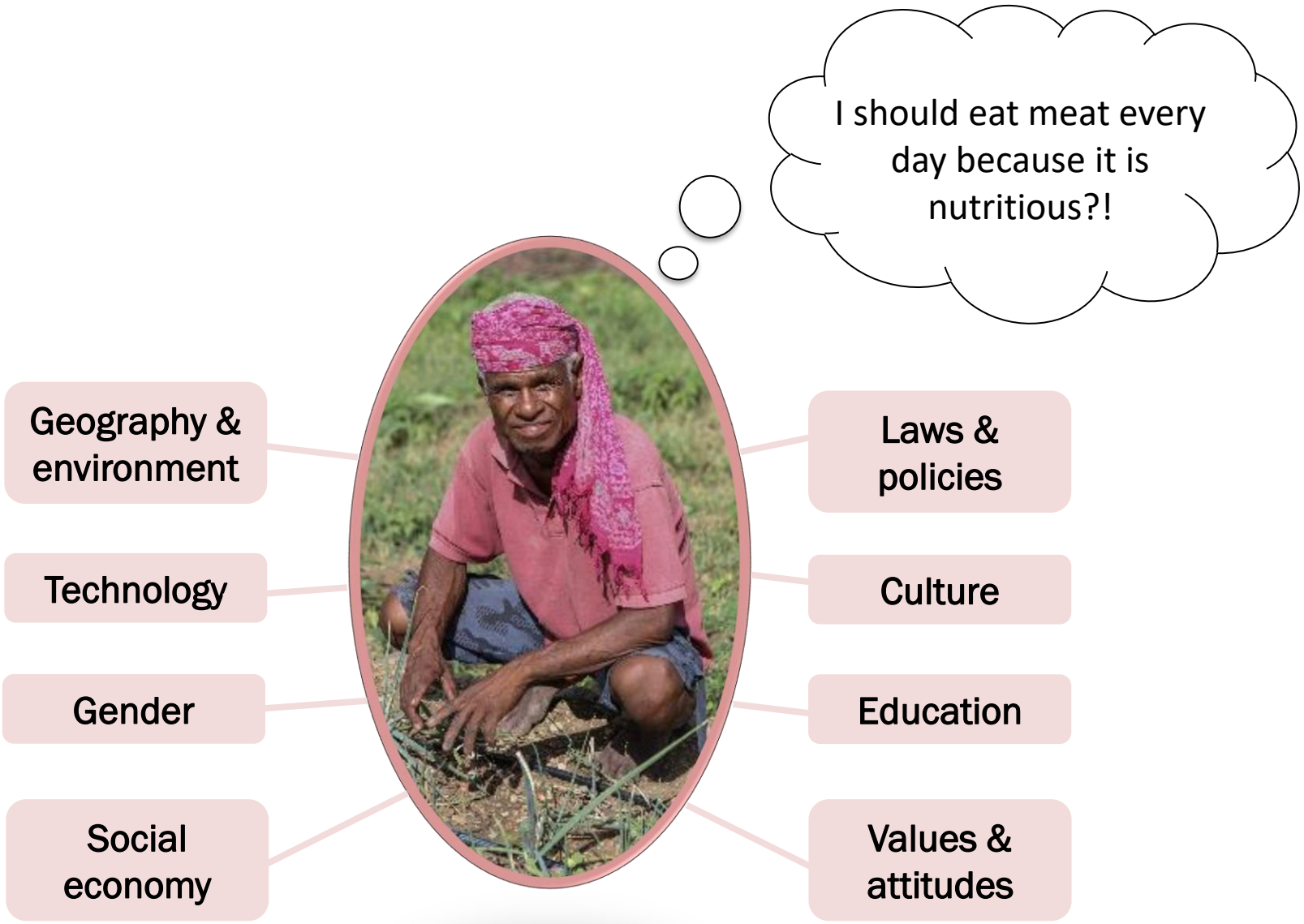
- Participants each fill out the handout about a behaviour they have tried to change.
- Don’t use an example from work. Use a personal example.
- 15 Minutes.

Activity: My own behaviour

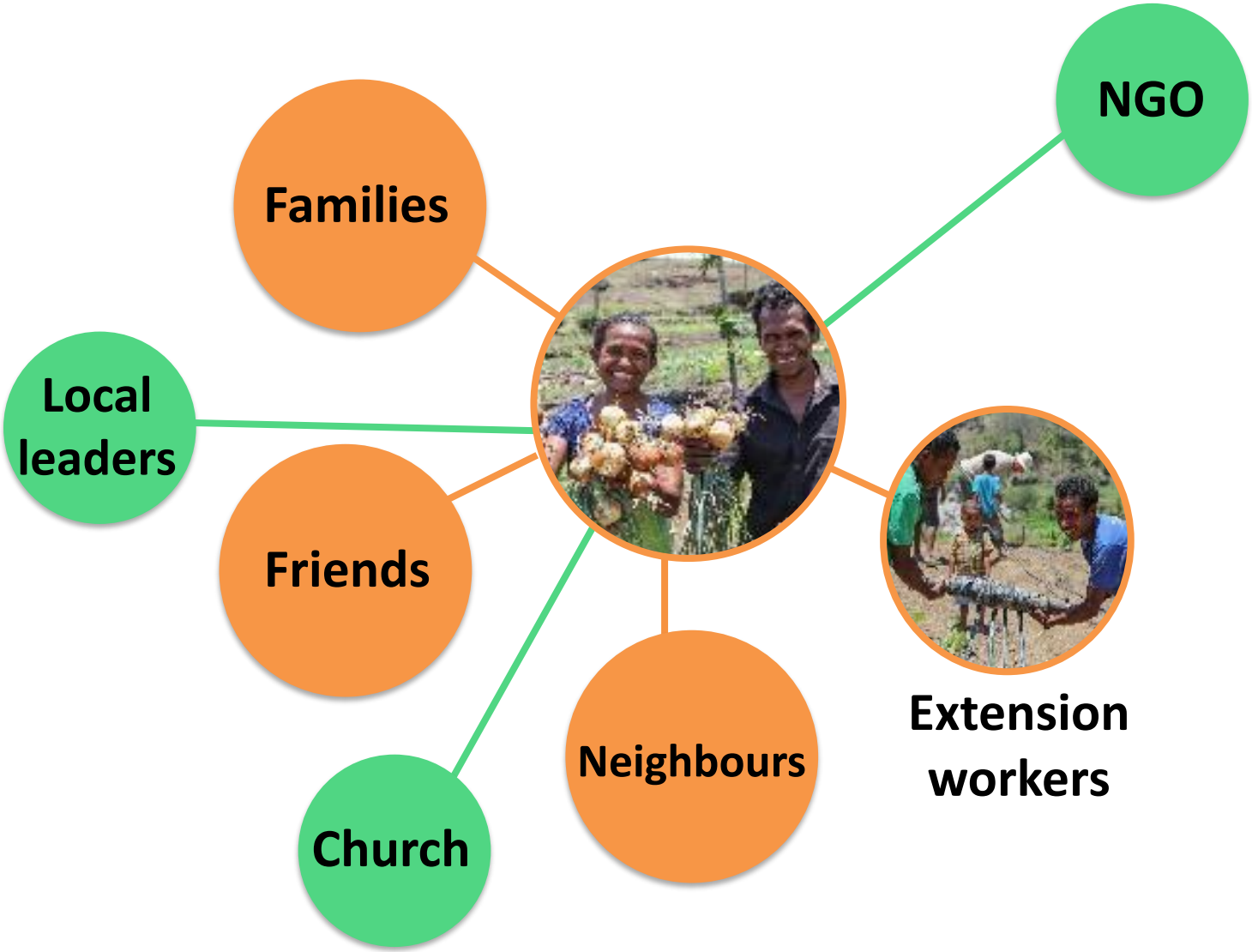
Describe a behaviour that you have already tried to change:

1. What motivated you to try and change this behaviour?
2. What are the benefits that will happen if you can successfully change the behaviour?
3. What steps did you take to change the behaviour?
4. What made changing the behaviour difficult?
5. What made changing the behaviour easy?
6. Were you successful? If successful, how long did it take?

Factors that influence behaviour



Who should we focus on?



What practices do we want to promote through NSA?

- Farmers plant nutritious crops (soy, orange sweet potato, peanuts, moringa, etc.) for their family to eat.
- Farmers keep some of their produce (soy, orange sweet potato, peanuts, moringa, etc.) for their family to eat.
- Farmers use their money to buy foods that are nutritious for their family to eat.

Session 8: Gender considerations in NSA

What's the difference between sex and gender?

- **Sex is generally determined by our bodies** – a person being male or female from birth.
- **Gender is a social construct** – this depends on many things including history, economics, culture, and is always changing

A healthy family gets only one egg from their chicken. Who eats it?

Taboo/banned foods

- What are the taboo foods in your municipality and village?
- Who is it usually banned for?
- Who decides what is taboo?
- Brainstorm: What can you do to promote discussions about taboo foods? What can support change?

Session 9: Comparing NSA implementation

Group activity: Comparing NSA implementation

- Split into 4 groups and give a separate case study to each group for discussion.
- To save time, case studies can be distributed before the session (as homework).
- Each group considers the following questions:
  - What are the advantages of the program in the case study?
  - From your analysis what are the disadvantages/obstacles?
  - How can we resolve the disadvantages/obstacles? Who can do this?
  - What do you think about the obstacles farmers face about sale vs consumption of food? What can an extension worker do?

Democratic Republic of Congo

USAID's RISE Program in North Kivu, in partnership with CRS and Caritas

- 43% stunting of children aged 6-59 months.
- Farmer groups organised training in good practice for diversification.
- Members distributed vegetable seeds within their groups including cabbage, spinach, eggplant/aubergine, onion and carrots.
- Then members planted and produced their own seeds and sold their vegetable harvest
- After selling their vegetables, members bought and raised rabbits for home consumption.

Timor-Leste

Mercy Corps Aquaculture Project (COMPAC-TL)

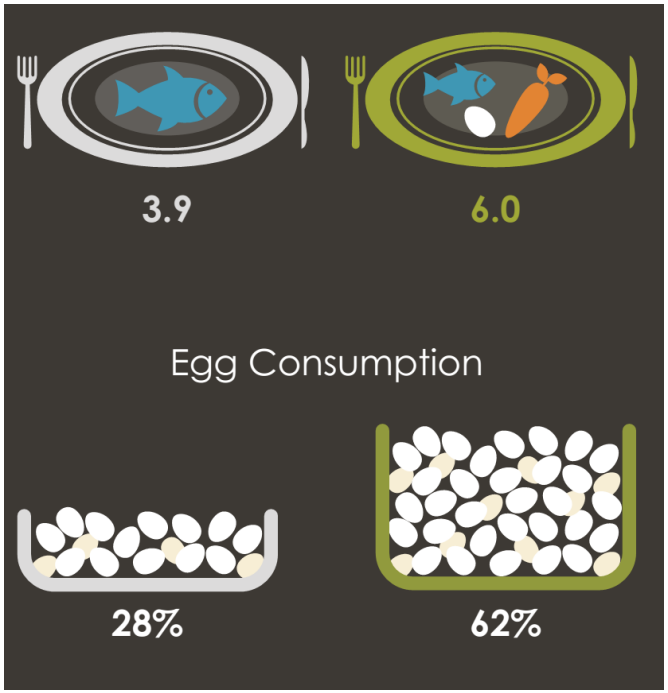
- Mercy Corps has committed to combatting malnutrition and poverty through aquaculture activities. COMPAC-TL was an NSA project focused on aquaculture.
- Nutritional gap: Protein
- Produce required: Fish (Tilapia)
- Activities implemented: education and promotion of fish
- Approaches/materials used: educational pamphlets, cooking classes, healthy fish recipes.

Mercy Corps, COMPAC-TL 2016

Bangladesh

SPRING Project's *Farmer Nutrition Field School*

- Nutritional gap: Protein
- Farmer Nutrition Field School
  - Held over 9 months with pregnant and breastfeeding women
  - Topics: importance of household nutrition, how to improve practice of growing vegetables, fish farming and chicken raising.
  - Strong connection between improving production quality and improving household nutrition practices.
- From 2014 to 2015, participants' nutrition scores increased from 3.9 to 6.0



Timor-Leste

HIAM Health: "Growing moringa for food security"

- Recruited community mobilisers from Bobonaro
- Community mobilisers trained in agriculture and nutrition
- Community mobilisers selected households to participate in training
- Community mobilisers accompanied and worked with households to establish moringa gardens at home.

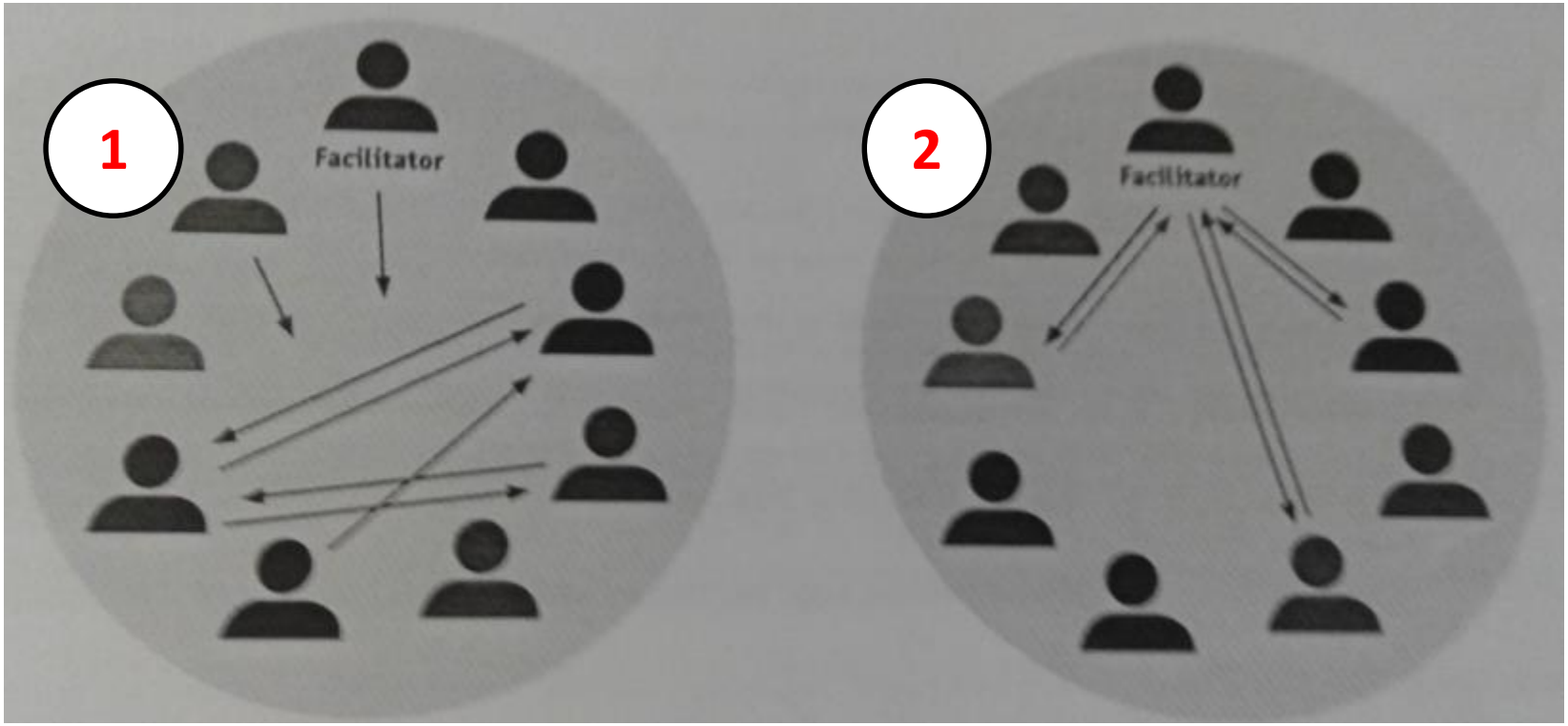
Activity revision and discussion

Comparing implementation of NSA

- Four groups present back the results of their discussion.

Session 10: Facilitation

What do you see in this image?



Source: CARE Farmer Field Business School

What is facilitation?

- Support people to find ideas and support themselves.
- Is a way to help other people to understand and make plans to achieve a collective objective.
- The process of how you do something without speaking but through action.
- A key part of guiding activities.

Source: CARE Farmer Field Business School

Let's watch a role play

Let's watch a role play

This role play shows some good and not so good facilitation skills for participants to observe and analyse themselves.

Topic: How farmers can plant more nutritious crops (sweet potato & peanuts)

Material: Use the nutritious crops poster

Characters:

- Extension worker (played by the facilitator)
- Woman farmer: very quiet, not really participating
- Older woman farmer: Has many traditional beliefs, believes many foods are sacred/taboo, does not give peanuts to her grandchild (1 year old)
- Older male farmer: Focused on production for sale only, does not give time for younger people to speak
- Male farmer/father: Talks a lot, does not give space for others to speak
- Younger farmer: Open to new ideas but has different ideas from older farmers.

Summary of the role-play

- Summary: An extension worker meets a group of farmers to discuss the nutritional value of the crops they are going to plant. The extension worker asks questions about the soil and the seeds that the farmers have.

- In the role play, the extension worker exhibits some good and some poor facilitation techniques
    - Good: Respects the farmers, tries to ask open questions, refers to the crops they are already growing, makes eye contact, encourages some people to speak, accepts a variety of ideas.
    - Poor: Ignores the older woman farmer when she is speaking, doesn't try to involve other women, focuses on certain crops only.

Analyse the role-play

- ❑ Let the community lead
- ❑ You can't force or make them do something
- ❑ Listen and encourage rather than teach
- ❑ Involve everyone (men and women)
- ❑ Encourage different ideas from everyone (men and women)
- ❑ Believe in the ability of the community
- ❑ Have patience and don't rush
- ❑ Ask questions to confirm the community's understanding

Group Activity: How can a facilitator manage participants like this?

As a facilitator, what can you do if you come across participants like this?

Case #1: Antonio is a participant who seems like he really wants to learn. It looks like he also likes to show off. He keeps talking and talking and talking.

Case #2: Maria seems to like being argumentative about the discussion topics. She likes going against the facilitator and embarrassing them in front of the other participants.

Case #3: Bonifacio tries to participate actively in the discussion but his ideas aren't clear because he mixes them up with lots of actions.

Case #4: Oldegar attends the training but never says a word. He's just silent.

Source: Trainer Manual: 'Formasaun ba Pesoál Kuidadu Saúde Primária', MoH 2017

Group Activity: How can a facilitator manage participants like this?

As a facilitator, what can you do if you come across participants like this?

Case #5: Rosa sometimes speaks out against Mafalda's ideas. She's successful in getting other participants to support her ideas. Mafalda also starts realising this and receives the support of other participants.

Case #6: Adelio speaks when given the opportunity but never speaks about the topic. He normally speaks about an unrelated topic.

Case #7: Elijita continues to ask the facilitators' opinion about the topic. She sometimes asks questions that are difficult for the facilitator to respond to.

Case #8: Moises follows the discussion and pays attention. But he doesn't say what he's thinking. When he does speak, it's in a confused way.

Source: Trainer Manual: Formasaun ba Pesoál Kuidadu Saúde Primária, MoH 2017

Facilitation practice (individual)

1. Facilitator prepares a topic for each participant
2. Participants pick a topic that the facilitator has already prepared (lottery)
3. Participants develop their materials individually for facilitation based on the topic that they picked.

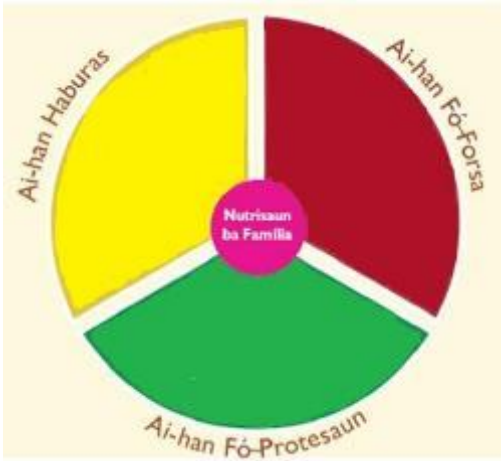
Facilitation practice (group)

1. Each group develops a role play to show their facilitation skills.
2. Groups will compete with each other for a prize.
3. Facilitators will use the checklist to give scores to other groups.

Session 11: Implementation and next steps

Review of individual activities: Identifying foods in each village

- Return back to the village you work in and complete based on the questions and seasonal calendar



Food group limited
- Which food group?

Why is it limited?
- Why?
- At what time?

How can we find a solution?
- MAF?
- Extension workers themselves
- Activities which already exist

Process and next steps

- Open a discussion with participants about next steps in the process based on your training plan.

Post-test

Thank you

Ministério da Saúde

TOMAK

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